

CLAIMS

1. A television broadcast content distributing system comprising:

5 a plurality of television broadcast content distributing servers for generating television broadcast contents;

10 a plurality of television broadcast content receiving terminals for receiving said television broadcast contents;

15 a first channel allocating switch, connected to said television broadcast content distributing servers, for allocating channels to said television broadcast content distributing servers, respectively;

20 a plurality of second channel allocating switches, each connected to one or more of said television broadcast content receiving terminals, said each of said second allocating channel switches allocating one or more of said channels to said one or more of said television broadcast content receiving terminals; and

25 a plurality of virtual local area networks, each arranged in correspondence with one of said channels between outputs of said first channel allocating switch and inputs of said second channel allocating switches.

2. A television broadcast content distributing system comprising:

30 a plurality of television broadcast content distributing servers for generating television broadcast contents;

35 a default server for generating a menu of said television broadcast contents;

40 a plurality of television broadcast content receiving terminals for receiving said television broadcast

contents and said menu of said television broadcast contents;

a first channel allocating switch, connected to said television broadcast content distributing servers and said default server, for allocating channels to said

5 television broadcast content distributing servers and said default server, respectively;

a plurality of second channel allocating switches, each connected to one or more of said television broadcast content receiving terminals, said each of said

10 second allocating channel switches allocating one or more of said channels to said one or more of said television broadcast content receiving terminals; and

a plurality of virtual local area networks, each arranged in correspondence with one of said channels between outputs of said first channel allocating switch and inputs of said second channel allocating switches.

3. The television broadcast content distributing system as set forth in claim 2, wherein each of said second channel allocating switches comprises:

20 a control section;

a correspondence storing section, connected to said control section, for storing a correspondence table between physical addresses of said television broadcast content receiving terminals connected to said each of said 25 second channel allocating switches and selected ones of said virtual local area networks; and

a switch section, connected to said control section and provided between said virtual local area networks and one or more of said television broadcast content receiving 30 terminals.

4. The television broadcast content distributing system as set forth in claim 3, wherein said correspondence storing section comprises a nonvolatile memory,

5 said control section receiving a power-on signal from one of said television broadcast content receiving terminals and allocating one of said virtual local area networks by referring to said correspondence storing section using a physical address of said one of said television broadcast content receiving terminals.

5. The television broadcast content distributing system as set forth in claim 3, wherein said correspondence storing section comprises a volatile memory,

10 said control section receiving a power-on signal from one of said television broadcast content receiving terminals and allocating one of said virtual local area networks by referring to said menu of said television broadcast contents generated from said default server.

15 6. The television broadcast content distributing system as set forth in claim 5, wherein said control section registers said allocated one of said virtual local area networks in said correspondence storing section by referring to the physical address of said one of said television broadcast content receiving terminals.

20 7. The television broadcast content distributing system as set forth in claim 3, wherein said control section receives a channel switching request signal from one of said television broadcast content receiving terminals and allocates one of said virtual local area networks by referring to said menu of said television broadcast contents generated from said default server.

25 8. The television broadcast content distributing system as set forth in claim 7, wherein said control section registers said allocated one of said virtual local area networks in said correspondence storing section by referring to the physical address of said one of said television broadcast content receiving terminals.

9. The television broadcast content distributing system as set forth in claim 2, wherein said default server cyclically receives said television broadcast contents from said television broadcast content distributing servers to generate said menu of said television broadcast contents by reducing images thereof.

10. The television broadcast content distributing system as set forth in claim 2, wherein said default server time-divisionally receives said television broadcast contents from said television broadcast content distributing servers to generate said menu of said television broadcast contents by time-divisionally generating said television broadcast contents.

11. The television broadcast content distributing system as set forth in claim 2, wherein each of said second channel allocating switches comprises:

a control section;

20 a correspondence storing section, connected to said control section, for storing a correspondence table between physical addresses of said television broadcast content receiving terminals connected to said each of said second channel allocating switches and selected ones of said virtual local area networks;

25 a switch section, connected to said control section and provided between said virtual local area networks and one or more of said television broadcast content receiving terminals; and

a transceiver, connected to said default server, for communicating with said default server.

30 12. The television broadcast content distributing system as set forth in claim 11, wherein said correspondence storing section comprises a nonvolatile memory, said control section receiving a power-on

signal from one of said television broadcast content receiving terminals and allocating one of said virtual local area networks by referring to said correspondence storing section using a physical address of said one of said television broadcast content receiving terminals.

13. The television broadcast content distributing system as set forth in claim 11, wherein said correspondence storing section comprises a volatile memory,

 said control section receiving a power-on

10 signal from one of said television broadcast content receiving terminals, reading one of said virtual local area networks by referring to said menu of said television broadcast contents generated from said default server, determining whether said read one of said virtual local area networks is chargeable or
15 free, carrying out an authentication when said read one of said virtual local area networks is chargeable, and allocating said read one of said virtual local area networks when said read one of said virtual local area networks is free or when said authentication is permitted.

20 14. The television broadcast content distributing system as set forth in claim 13, wherein said control section registers said allocated one of said virtual local area networks in said correspondence storing section by referring to the physical address of said one of said television broadcast content receiving terminals.

25 15. The television broadcast content distributing system as set forth in claim 11, wherein said control section receives a channel switching request signal from one of said television broadcast content receiving terminals, reads one
30 of said virtual local area networks by referring to said menu of said television broadcast contents generated from said default server, determines whether said read one of said virtual local area networks is chargeable or free, carries out

an authentication when said read one of said virtual local area networks is chargeable, and allocates said read one of said virtual local area networks when said read one of said virtual local area networks is free or when said authentication is
5 permitted.

16. The television broadcast content distributing system as set forth in claim 15, wherein said control section registers said allocated one of said virtual local area networks in said correspondence storing section by referring
10 to the physical address of said one of said television broadcast content receiving terminals.

17. The television broadcast content distributing system as set forth in claim 2, further comprising:

15 an Internet protocol router connected to said first channel allocating switch; and
an additional virtual local area network arranged in correspondence with a channel for said Internet protocol router between an output of said first channel allocating switch and the outputs of said second channel
20 allocating switches.

18. The television broadcast content distributing system as set forth in claim 17, wherein a fixed Internet protocol address is given to said system.

19. A television broadcast content distributing system
25 comprising:

a plurality of television broadcast content distributing servers for generating television broadcast contents;

30 a plurality of television broadcast content receiving terminals for receiving said television broadcast contents;

a plurality of first channel allocating switches, connected to said television broadcast content

distributing servers using multicast communication paths, for allocating channels to said television broadcast content distributing servers, respectively;

a plurality of groups of second channel

5 allocating switches, each connected to one or more of said television broadcast content receiving terminals, said each of said second allocating channel switches allocating one or more of said channels to said one or more of said television broadcast content receiving terminals; and

10 a plurality of groups of virtual local area networks, each group arranged in correspondence with one of said channels between outputs of one of said first channel allocating switches and inputs of one group of said second channel allocating switches.

15 20. A television broadcast content distributing system comprising:

a plurality of television broadcast content distributing servers for generating television broadcast contents;

20 a default server for generating a menu of said television broadcast contents;

a plurality of television broadcast content receiving terminals for receiving said television broadcast contents and said menu of said television broadcast contents;

25 a plurality of first channel allocating switches, connected to said television broadcast content distributing servers and said default server using multicast communication paths, for allocating channels to said television broadcast content distributing servers and said default server, respectively;

a plurality of groups of second channel allocating switches, each connected to one or more of said television broadcast content receiving terminals, said each

of said second allocating channel switches allocating one or more of said channels to said one or more of said television broadcast content receiving terminals; and

5 a plurality of groups of virtual local area networks, each group arranged in correspondence with one of said channels between outputs of one of said first channel allocating switches and inputs of one groups of said second channel allocating switches.

10 21. A television broadcast content distributing system comprising:

 a plurality of television broadcast content distributing servers for generating television broadcast contents;

15 a default server for generating a menu of said television broadcast contents;

 an Internet protocol router;

 a plurality of television broadcast content receiving terminals for receiving said television broadcast contents and said menu of said television broadcast contents
20 and communicating with the Internet;

 25 a plurality of first channel allocating switches, connected to said television broadcast content distributing servers, said default server and said Internet protocol router using multicast communication paths, for allocating channels to said television broadcast content distributing servers, said default server and said Internet protocol router, respectively;

 30 a plurality of groups of second channel allocating switches, each connected to one or more of said television broadcast content receiving terminals, said each of said second allocating channel switches allocating one or more of said channels to said one or more of said television broadcast content receiving terminals; and

a plurality of groups of virtual local area networks, each groups arranged in correspondence with one of said channels between outputs of one of said first channel allocating switches and inputs of one group of said second 5 channel allocating switches.